Using SADeRez 28

SADeRez creates a text representation of the resource fork of a file. It started out life as DeRez, a tool in Apple's Macintosh Programmer's Workshop (MPW). MPW has a command-line interface, much like Unix. At times, SADeRez seems to work oddly or has options you can't use because of its heritage. But, despite its odd upbringing, SADeRez is still a powerful and useful tool.

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What Is SADeRez?

SADeRez (which stands for Stand-Alone DeRez and is pronounced 'Say Dee Rez') creates a text representation (a resource description file) of the resource fork of a file, according to the resource type declarations in one or more resource description files.

A resource description file is a file of type declarations in the format used by the resource compiler, Rez. The type declarations for standard Macintosh resources are in the files `Types.r` and `SysTypes.r`, in the `Rez Includes` folder. If no resource description file is specified, the output consists of `data` statements giving the resource data in hexadecimal form, without any additional format information.

Note

SADeRez uses resource description files as both input and output. The input description files define resource types (such as `'WIND'`), and the output description file defines actual resources (such as the document window for your application)

If the output of SADeRez is used as input to THINK Rez, with the same resource description files, it produces the same resource fork that was originally input to SADeRez. SADeRez is not guaranteed to be able to run a declaration backwards; if it can't, it produces a `data` statement instead of the appropriate `resource` statement.

SADeRez ignores all `include` (but not `#include`), `read`, `data`, `change`, `delete`, and `resource` statements found in the resource description files. (But it still parses these statements for correct syntax.)

Running SADeRez

When you run SADeRez, its dialog is grayed out, except for the File to decompile button. You can either open a SADeRez options file you previously saved or choose a file to decompile. Now, the dialog looks like the one in Figure 28-1. To continue, you change your options and click the button titled Saderez. If there are no errors, SADeRez decompiles your file and exits. If there are errors, SADeRez displays them in the messages window, described below. To cancel without decompiling, click the Cancel button or choose **Quit** from

the **File** menu. More information on choosing and saving your options follows.

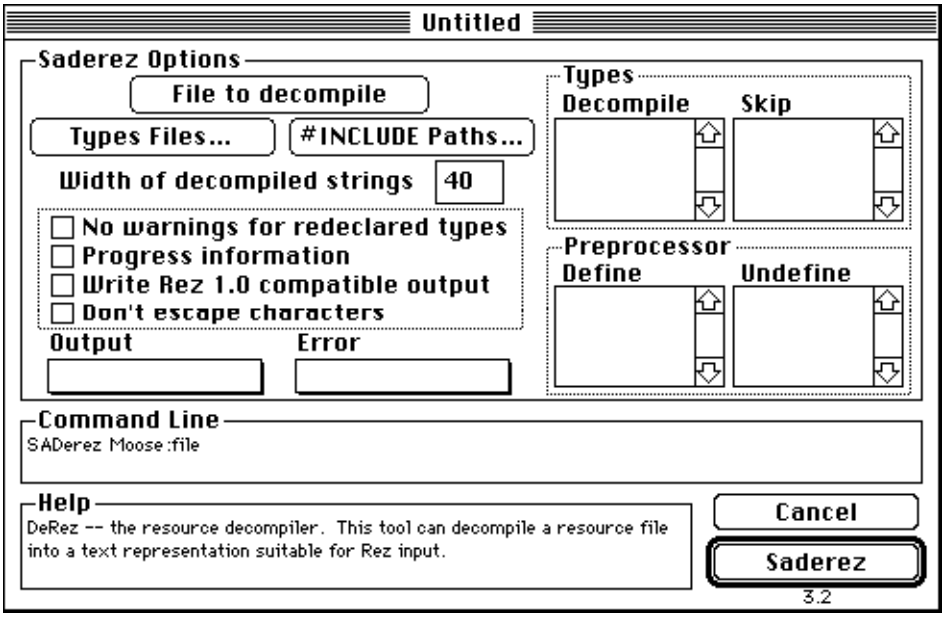

Figure 28-1 SADeRez dialog

The **SADeRez** dialog has two major parts. In the top portion, enclosed in a box titled Saderez Options, you set options for SADeRez's operation. In the bottom portion, containing the boxes named Command Line and Help, you can see how the options work.

The Command Line box may seem out of place in a Macintosh program. But remember that SADeRez started life as DeRez, an MPW tool. The Command Line box displays a DeRez command line that has the same options set as the **SADeRez** dialog. You cannot edit this line.

The Help box gives you information about the dialog. When you click an option or a box, a description of it appears in this box.

Choosing Input Files

You must choose at least two input files. First, choose a resource file, the file that contains resources you want decompiled. Next, choose one or more resource description files, which have the definitions of

resource types. You specify these with the buttons in the upper left corner of the **SADeRez** dialog. These buttons are illustrated below.

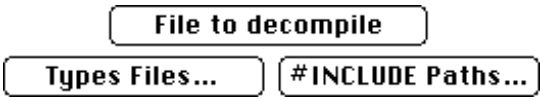

Figure 28-2 Buttons for specifying input files

Choosing the resource file

First, you need to choose a resource file. The File to decompile button displays a standard file dialog that lets you select one. The dialog offers to let you select any file, only an application, or an MPW tool.

Choosing a description file

The Types Files button displays a dialog that lets you select one or more description files. The dialog in Figure 28-3 has `Types.r` (in the `Rez #includes` folder) selected as the description file.

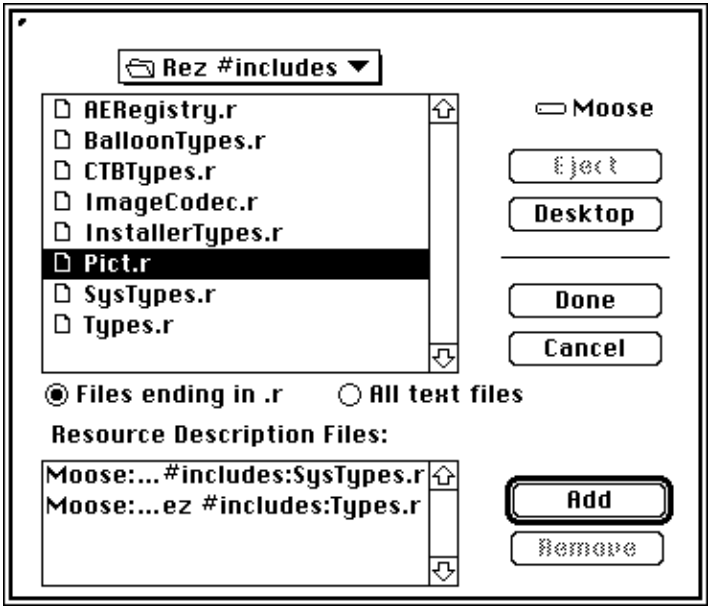

Figure 28-3 Types Files dialog

These buttons let you choose which files appear in the top list:

- Files ending in .r button
- All text files button

You can add and remove files using these methods:

- To add a description file to the list in the bottom pane, select it in the standard file list in the top pane, and click Add. Its name is added to the list below. You can also double-click the file to add it to the bottom list.
- To remove a description file from the bottom list, select it, and click Remove.
- When you've selected all your description files, click Done.
- To cancel what you've done and leave the list of files as it was, click Cancel.

Choosing #INCLUDE paths

If any of your description files contain `#include` statements, you'll need to select the folders (also called directories or search paths) in which SADeRez can find them. To choose these, click the #INCLUDE Paths button to display a dialog. The dialog in

Figure 28-4 has the folder `Rez #includes` in the list of folders to be searched.

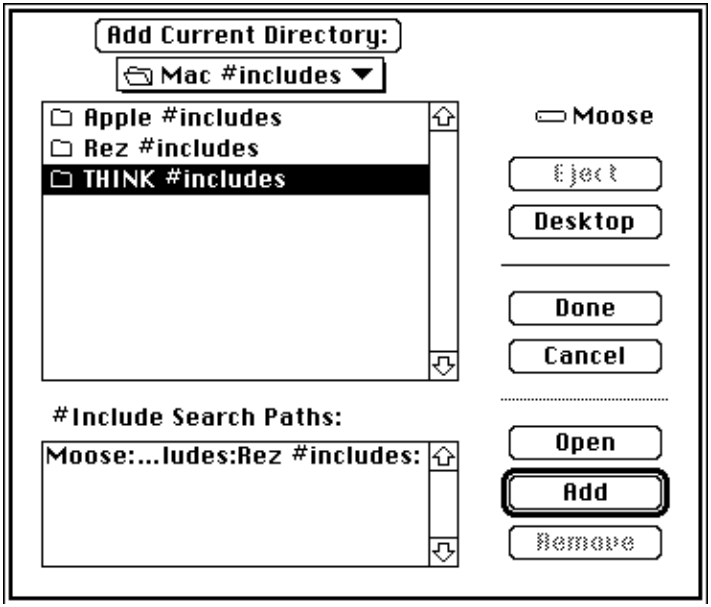

Figure 28-4 #INCLUDE Paths dialog

Note

SADeRez ignores `include` statements in the resource description files.

You can add and remove folders as follows:

- To add a folder to the list of folders searched in the bottom pane, select it in the file list in the top pane, and click the Add button. Its name is added to the list in the bottom pane.
- To add the folder you're currently in, click Add Current Directory button. For example, clicking Add Current Directory in Figure 28-4 would add `Mac #includes` to the bottom list.
- To open a folder to see the other folders in it, select it and click Open, or double-click it.

- To remove a description file from the bottom list, select it, and click Remove.
- When you've selected all the folders you want, click Done.
- To cancel what you've done and leave the list of folders as it was, click Cancel.

Choosing Output Files

You need to choose an output description file. This contains the definitions of the resources in your resource file. You can also choose an error file, an additional place to write error, warning, and status messages. SADeRez always writes its messages to the messages window, described below. Choose an error file if you always want your messages saved to a particular file.

You choose these files with the buttons in the lower left corner of the **SADeRez Options** box. The buttons in Figure 28-5 set the description file to be the new file `Test.r` and the error file to be the existing file `Errors`.

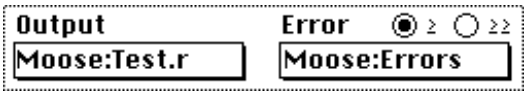

Figure 28-5 Buttons for specifying output files

Clicking the button under either Output or Error brings up the same pop-up menu, shown in Figure 28-6.

Figure 28-6 Output file menu

This is what the options mean:

- No Output: Doesn't write out the output.
- New File: Lets you create a file to write to.

- Existing File: Lets you select an existing file to write to.
- Standard Output, Standard Diagnostic, Null Device: These act the same as No Output.

If you select an existing file as an output file, you see two radio buttons above the menu, shown in Figure 28-7. (In the menu under Output, the radio buttons are labeled > and >>).

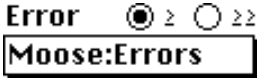

Figure 28-7 Output file menu buttons

These let you choose whether or not to overwrite the existing file:

- ≥ or **>** The new output overwrite the existing file.
- ≥≥ or **>>** The new output is appended to the end of the existing file.

Setting Options

The rest of the SADeRez Options box lets you select options describing how to decompile your file. The list of options in Figure 28-8 is between the input and output buttons.

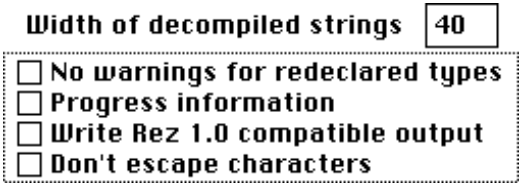

Figure 28-8 Setting options

This is what the options mean:

- Width of decompiled strings: Sets the maximum string size. It must be in the range 2–120. This controls string width in the output.
- No warnings for redeclared types: If selected, SADeRez does not print a warning message to the error file when a resource type is redeclared in the description files.

- Progress information option: If selected, SADeRez writes its version number and information on the decompiled resources to the error file.

- Write Rez 1.0 compatible output: If selected, SADeRez will generate a description file that is backward compatible with Rez 1.0.

- Don't escape characters: If selected, characters that are normally escaped (such as `\0xff`) are no longer escaped. Instead they are printed as extended Macintosh characters. (Note: Not all fonts have all the characters defined.) Normally, only characters with values between `0x20` and `0xD8` are printed as Macintosh characters. With this option, however, all characters (except null, newline, tab, backspace, form feed, vertical tab, and rubout) are printed as characters, not as escape sequences.

Choosing the types to decompile

In the Types box, you can choose which types of resources SADeRez decompiles. This box contains two lists:

- Decompile box: If you want to decompile only a few resource types, enter their names here. For example, with the box in Figure 28-9, SADeRez decompiles resources of type `'WIND'` only.

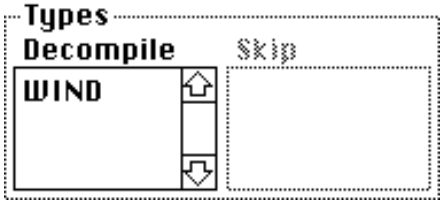

Figure 28-9 Decompile only WIND

- Skip box: If you want to decompile every resource type with a few exceptions, enter the exceptions here. For ex-

ample, with the box Figure 28-10, SADeRez decompiles all resources, except those of type `'PICT'`.

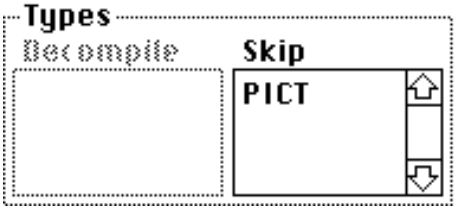

Figure 28-10 Decompile everything but PICTs

You can use only one list at a time. Whenever one has anything in it, the other is grayed out. If you don't use either list, SADeRez decompiles everything in the input file.

Preprocessor

In the Preprocessor box, you can define and undefine macro variables. In the Defines list, enter the variables you want defined and their values. Use a new line for each pair of variables and values. If you don't enter a value, the variable is set to the null string (""). In the Undefines list, enter the variables you want undefined. For example, setting up the Preprocessor box as in Figure 28-11 is like adding these lines to the beginning of each resource description file:

```
#define c 186282
#define PASCAL
#undef  DESK_ACC
```

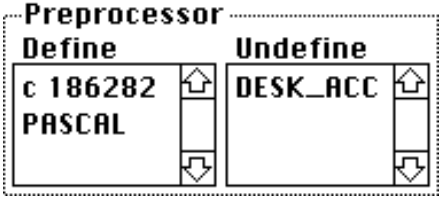

Figure 28-11 Preprocessor box

Saving and Restoring Options

SADeRez lets you save your option settings in a SADeRez options file. This options file contains the names of your input and output files, in addition to all the other option settings.

When the **SADeRez** dialog box is in the front, the **File** menu contains these commands to let you save and restore your settings:

- **New:** Clears your current settings and lets you create a new options file.
- **Open:** Lets you choose a file you previously saved and restores those settings.
- **Save:** Saves the current settings to the options file you're using. If you aren't using an options file (that is, you haven't opened or saved one), it lets you create one.
- **Save As:** Lets you create an options file containing your current settings.

When you double-click a SADeRez options file in the Finder, SADeRez doesn't display its dialog. It just compiles your files, displays your errors (if any), and exits.

The Messages Window

If SADeRez encounters no problems while decompiling your file, it exits to the Finder when it's done. But if SADeRez needs to display

any error, warning, or status messages, it uses the messages window, like the one in Figure 28-12:

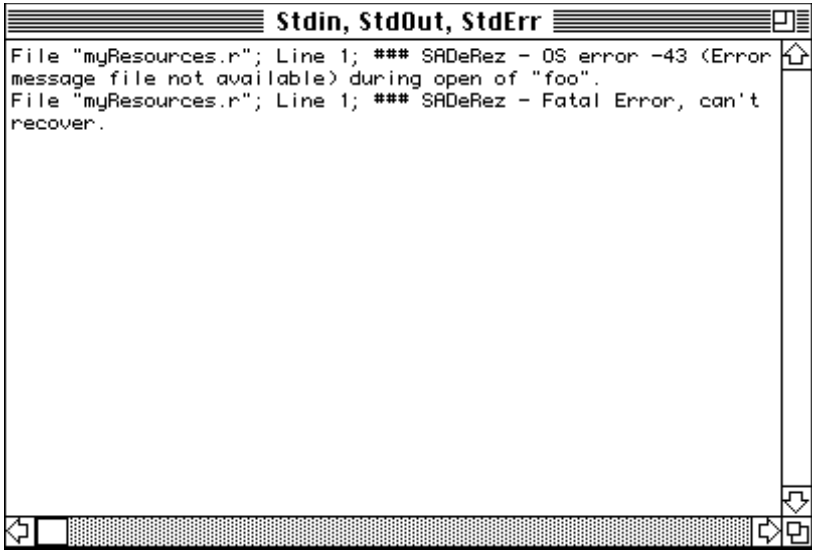

Figure 28-12 Messages window

You can freely edit the contents of the message window, as if it were a text editor. You can add your own comments and **Cut**, **Copy**, or **Paste**, using the **Edit** menu.

When the messages window is in the front, the **File** menu contains these commands to let you save and print your messages:

- **Close:** Closes the messages window.
- **Save:** Saves your messages to a file. If you haven't yet chosen a file name, it lets you choose one.
- **Save As:** Lets you save your messages to a different file.
- **Page Setup:** Displays the standard **Page Setup** dialog for your printer.
- **Print:** Lets you print the contents of the messages window.

With the **Font** and **Size** menus, you can change the font type and size that SADeRez uses to display and print your messages.

Note

If you always save your messages to a particular file, you can use the **Redirection** dialog to choose an error file. SADeRez writes your messages to both the messages window and the error file.